

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ian W. Rickets et al. Examiner: Unknown
Serial No.: 10/658,099 Group Art Unit: Unknown
Filed: September 9, 2003 Docket: C330.102.101
Title: SONOELASTOGRAPHY USING POWER DOPPLER

INFORMATION DISCLOSURE STATEMENT

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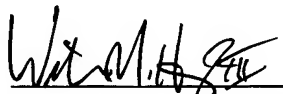
Sir:

Pursuant to 37 C.F.R. § 1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached form PTO-1449. One copy of each "Other Document" reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No certification or fee is required.

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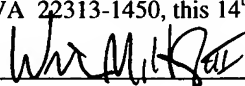
Respectfully submitted,

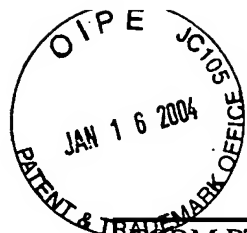

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Please grant any extension of time necessary for entry; charge any fee due to Deposit Account No. 500471.

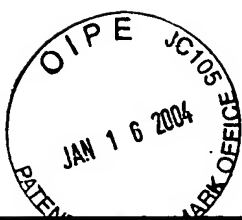
CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail with sufficient postage, in an envelope addressed to Mail Stop Missing Parts, Commissioner for Patents, on P.O Box 1450, Alexandria, VA 22313-1450, this 14th day of January, 2004.

By 
Name: William M. Hienz III



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| FORM PTO-1449 MODIFIED | | | | Docket No.: C330.102.101 | | Application No.: 10/658,099 | |
| INFORMATION DISCLOSURE CITATION IN AN APPLICATION | | | | APPLICANT: Ian W. Rickets et al. | | | |
| | | | | FILING DATE: September 9, 2003 | | | |
| | | | | GROUP ART UNIT: Unknown | | | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| EXAMINER INITIAL | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE | |
| | 5,086,775 | 02-1992 | Parker et al. | | | | |
| | 5,099,848 | 03-1992 | Parker et al. | | | | |
| FOREIGN PATENT DOCUMENTS | | | | | | | |
| EXAMINER INITIAL | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION YES NO | |
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| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.) | | | | | | | |
| | Bishop, J. et al., "Magnetic Resonance Imaging of Shear Wave Propagation in Excised Tissue," Journal of Magnetic Resonance Imaging, 8:1257-1265, 1998. | | | | | | |
| | Cooper, D.H. et al., "Estimating Motion in Noisy, Textured Images: Optical Flow in Medical Ultrasound," British Machine Vision Conference (BMVC), pages 585-594, 1996. | | | | | | |
| | Doyley, M.M. et al., "Evaluation of an Iterative Reconstruction Method for Quantitative Elastography," Phys. Med. Biol, 45:1521-1540, 2000. | | | | | | |
| | Gao, L. et al., "Imaging of the Elastic Properties of Tissue – a Review," Ultrasound Med. Biol, 22:959-77, 1996. | | | | | | |
| | Jensen, J.A., "Ultrasound Imaging and its Modelling," Imaging of Complex Media with Acoustic and Seismic Waves, Topics in Applied Physics, pages 1-38, 2000. | | | | | | |
| | Kaluzynski, K. et al., "Strain Rate Imaging using Two-Dimensional Speckle Tracking," IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control, 48 (4):1111-1123, July 2001. | | | | | | |
| | Lerner, R.M. et al., "Sono-Elasticity Images Derived from Ultrasound Signals in Mechanically Vibrated Targets," Rochester Center for Biomedical Ultrasound, University of Rochester, Rochester, New York, pages 127-129. | | | | | | |
| | Lerner, R.M. et al., "Sono-elasticity: Medical Elasticity Images Derived from Ultrasound Signals in Mechanically Vibrated Targets," In Proc. 16 th Int. Symp. Acoustical Imaging, vol. 19, pages 317-327, New York, 1988. | | | | | | |
| | McKenna, Stephen et al., "Sonoelastography using Compensated Power Doppler," Proceedings of the Second IASTED International Conference: Visualization, Imaging, and Image Processing, Malaga, Spain, September 9-12, 2002. | | | | | | |
| | O'Donnell, M. et al., "Internal Displacement and Strain Imaging Using Ultrasonic Speckle Tracking," IEEE Trans. Ultrason. Ferroelectr. Freq. Control, 41:314-325, 1994. | | | | | | |
| | Ophir, J., "Elastography: Ultrasonic Imaging of Tissue Strain and Elastic Modulus in Vivo," Eur. J. Ultrasound, 3:49-70, 1996. | | | | | | |
| | Ophir, J., "Scientists Use Finite Element Method in Developing New Cancer Detection Technique," NASA Tech. Briefs, pages 86-87, August 1998. | | | | | | |
| | Prager, R.W. et al., Abstract of "Rapid Calibration for 3-D Freehand Ultrasound," Ultrasound in Medicine and Biology, 24(6):855-869, 1998. | | | | | | |
| | Rohling, R.N. et al., "Spatial Compounding of 3D Ultrasound Images," Technical Report Tech. Rep. CUED/F-INFENG/TR270, University of Cambridge, October 1996. | | | | | | |



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| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.) | | | |
| | Rohling, R.N. et al., "Automatic Registration of 3-D Ultrasound Images," Technical Report Tech. Rep. CUED/F-INFENG/TR290, University of Cambridge, May 1997. | | |
| | Rubens, D. et al., "Sonoelasticity Imaging of Prostate Cancer: in vitro results," Radiology, 195:379-383, 1995. | | |
| | "Sonoelastography Using Compensated Power Doppler," University of Dundee, Department of Applied Computing, 2 nd IASTED International Conference: Visualization, Imaging, and Image Processing (VHP), Benalmadena Malaga, September 10 th 2002. | | |
| | Taylor, L. et al., "Three-Dimensional Sonoelastography: Principles and Practices," Phys. Med. Biol., vol. 45, pp. 1477-1494, 2000. | | |
| | Yamakoshi, Y. et al., "Ultrasonic Imaging of Internal Vibration of Soft Tissue under Forced Vibration," IEEE Trans. Ultrason. Ferroelectr. Freq. Control, 37:45-53, 1990. | | |
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